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September 5th, 1854.

DR. RUSCHENBERGER in the Chair.

A letter was read from Mr. Sandwith Drinker, dated Canton, June 17, 1854, giving notice of his having transmitted several objects of Natural History for the Museum of the Academy.

A communication was read, entitled "Description of some new Fossils from the cretaceous rocks of the Southern States, by M. Tuomey;" which, being intended for publication in the Proceedings, was referred to Dr. Leidy, Mr. Conrad and Dr. LeConte.

Dr. Leidy read a paper intended for publication in the Proceedings, entitled "Description of a fossil apparently indicating an extinct species of the Camel tribe." Referred to Mr. Cassin, Dr. J. A. Meigs and Mr. Phillips.

September 12th.

Vice President LEA in the Chair.

A letter was read from the Rev. Dr. J. L. Wilson, dated New York, Sept. 11, 1854, expressing his readiness to procure for the Academy a specimen, in skin, of Troglodytes gorilla, from Africa.

Also a letter from the Lyceum of Natural History of New York, dated September 14, 1854, acknowledging the receipt of the Proceedings, Vol. 7, Nos. 2 and 3, and Journal, Vol. 2, part 4.

September 26th.

MR. ORD, President, in the Chair.

The Committees on papers by Mr. Tuomey and Dr. Leidy, read 4th inst., reported in favor of publication in the Proceedings.

Description of some new Fossils, from the Cretaceous Rocks of the Southern States.

By M. TUOMEY.

The following brief characters are given in advance of more full descriptions, with figures, that may follow hereafter.

CEPHALOPODA.

1. NAUTILUS.

1. *Nautilus Spillmani.* Shell depressed vertically, umbilicated; last chamber large, inflated, spreading, emarginated, flattened beneath.

The depressed and inflated form of this fossil sufficiently distinguishes it from every other species of the genus in our cretaceous rocks.

Inscribed to Dr. Spillman, of Columbus, Miss.

Locality, Mississippi. Dr. Spillman.

2. *N. orbiculatus.* Shell somewhat discoid, thick in the centre and gradually thinner towards the circumference; last chamber very large, spreading at the

umbilicus; siphunculus nearly central; septa profoundly undulating, showing on the back a sharp recurved lip.

This is the largest of the genus found in our rocks, being ten inches in diameter. It resembles quite closely *N. Danicus*, especially in the undulations of the septa.

Locality, Alabama.

3. *N. angulatus*. Shell with the septa regularly curved; emarginated; medium space wide, flat, obtusely angular; siphunculus large, situated towards the inner margin of the chamber; aperture very wide.

Readily distinguished from *N. Dekayi*, which it resembles, by the angles on the back, and flat median space.

Locality, Mississippi.

2. AMMONITES.

1. *Ammonites magnificus*. Shell compressed, broadly oval; whorls rapidly decreasing in size, crossed by coarse nodose ribs; nodes at each extremity of the ribs, the outer nodes compressed and arranged on each side of the convex median space; septa not greatly ramified, dorsal lobe deeply bifurcated.

Bears some resemblance to *A. Delawarensis*, but is a very distinct species.

Diameter two feet.

Locality, Pickens county, Alabama.

2. *A. carinatus*. Shell covered with prominent, closely arranged ribs; ribs nodose, a little undulating; nodes in five revolving lines; nodes on each side of the median line compressed; median line carinated; whorls rapidly decreasing in width; aperture ovate.

From the preceding species this is distinguished by its more numerous and closely arranged ribs and numerous nodes.

A cast in calcareous sand, having a portion of the siphunculus beautifully preserved.

Locality, Columbus, Mississippi. Dr. Spillman.

3. *A. binodosus*. Shell undulating with lines of growth; nodes in two revolving lines, equi-distant from the sides of the whorls, inner line more prominent; median space narrow, flat; aperture elliptic.

This very distinct species has a considerable part of the shell remaining completely silicified.

The narrow, flat median space, the absence of ribs, and two distinct rows of nodes, separate this from its congeners.

Locality, Vance's Ferry, Alabama.

4. *A. lobata*. Shell discoid, smooth, thin towards the circumference; dorsal lobe finely serrate; lateral lobes terminating in large bilobed cells.

This fossil, of which I have only a fragment, resembles *A. placenta*, but is distinguished from it by the remarkable cells that terminate the lateral lobes.

Locality, Noxubie county, Mississippi. Mr. Richardson.

5. *A. ramosissimus*. Shell remotely ribbed, slightly nodose; median line compressed; septa profusely foliated, aperture oval.

The fragments of this fossil in our possession are at once recognised by the very numerous subdivisions of the lateral lobes of the septa, which cover the entire surface.

Locality, Sumter county, Alabama.

6. *A. angustus*. Shell with the whorls compressed crossed by distinct somewhat nodose ribs, each terminating in a robust knob, outside of which is a series of compressed tubercles; median space narrow and carinated.

Locality, Columbus, Mississippi. Dr. Spillman.

3. TURRULITES.

1. *T. alternatus*. Shell turreted, spire dextral; whorls angulated, lower side ornamented by two tuberculated carinæ, transversely plaited; plaits double the number of tubercles, alternately terminating in a tubercle.

Two fragments of this fossil have been found. Portions of the nacreous part of the shell remain, and show distinctly the deeply foliated margins of the septa.

This is the first notice of the occurrence of the genus *Turrulites* in the cretaceous rocks of the United States.

Locality, Noxubie county, Mississippi. L. C. Richardson, Esq.

GASTEROPODA.

1. TURRITELLA.

1. *T. fastigiata.* Shell regularly tapering; whorls somewhat flat, slightly indented by a revolving line; suture impressed; body whorl angular below; aperture round.

Locality.—Noxubie county, Mississippi. Mr. Richardson.

2. PHORUS.

1. *P. umbilicatus.* Shell depressed; whorls four, uneven, concave below; suture profound (in the cast); umbilicus deep, surrounded by a channel.

Distinguished from *Phorus* (*Trochus*) *leprosus* by the channelled umbilicus.

Diameter, 1.75 in.

Locality, Noxubie county, Mississippi. Mr. Richardson.

3. VOLUTA.

1. *V. cancellata.* Shell fusiform; whorls cancellated by close vertical ribs, and oblique revolving lines; ribs obsolete towards the base.

Locality, Noxubie county, Mississippi. Mr. Richardson.

2. *V. jugosa.* Shell fusiform; body whorl large; whorls few; suture slightly carinated; suture shell ridged or ribbed vertically.

Distinguished by the coarse ribs from the other cretaceous species.

Locality, Noxubie county, Mississippi. Mr. Richardson.

3. *V. Spillmanii.* Shell fusiform; body whorl large; whorls four, obsoletely ribbed; suture carinated; base with numerous revolving lines.

Locality, Columbus, Mississippi. Dr. Spillman.

4. *V. fusiformis.* Shell fusiform; body whorl undulating, smooth; suture not impressed; lip turned up (in the cast) at the upper edge of the aperture.

A well marked fossil; the casts are remarkable for the undulations on the last whorl.

4. FUSUS.

1. *F. eufauliensis.* Shell ovate: spire about half the length of the shell; whorls five, somewhat carinated on the shoulder; marked by vertical slightly curved ribs, terminating at the carina in obsolete nodes; suture impressed; body whorl and aperture large; canal abruptly bent.

Locality, Eufaula, Alabama. Mr. Thornton.

2. *F. turriculus.* Shell fusiform, gently tapering; whorls convex, crossed by vertical ribs; body whorl small; aperture ovate, small; canal abrupt.

Distinguished by the small size of the body whorl.

Locality, Columbus. Dr. Spillman.

5. PYRULA.

1. *P. trochiformis.* Shell top-shaped; body whorl large, inflated, covered with revolving raised lines; spire depressed, not flat; angle of the body whorl rounded; canal produced; aperture nearly circular.

Locality, Noxubie county, Mississippi. Mr. Richardson.

2. *P. Richardsonii.* Shell top-shaped; spire depressed, almost flat; body whorl angular, terminating suddenly in a canal.

Inscribed to L. C. Richardson, Esq., as a mark of respect for his zeal in investigating the geology of Noxubie county.

Locality, Noxubie county, Mississippi. Mr. Richardson.

6. CERITHIUM.

1. *C. nodosus.* Shell turrited; whorls six, convex, crossed by distant, strong ribs, swelled into nodes on the middle of the whorls; body whorl with revolving impressed lines below.

Locality, Alabama.

LAMELLIBRANCHIA.

1. TEREDO.

1. *T. calamus.* Shell thin, cylindrical, transversely wrinkled, large.

Diameter, 0.5 in.

Locality, Columbus, Mississippi. Dr. Spillman.

2. PANOPÆA.

1. *P. cretacea.* Shell oblong; buccal side shorter, slightly cuneate, rounded; anal side undulating, gaping.

Length, 1.5 in.

The only species known in our cretaceous rocks.

3. PHOLADOMYA.

1. *P. tenua.* Shell thin, oblong, somewhat inflated, radically ribbed; ribs obsolete on the anal side; umbones prominent.

Length, 1 inch.

4. CORBULA.

1. *C. caudata.* Shell oblong; somewhat equivalve, inflated, concentrically striate; buccal side broadly rounded; anal side abruptly contracted and produced; umbones incurved, not opposite.

Locality, Noxubie. Mr. Richardson.

5. CARDIUM.

1. *C. hemicyclicus.* Shell thin, very inequilateral, radically ribbed; ribs numerous, umbones somewhat depressed.

Distinguished from our other species by the inequilateral valves.

Locality, Alabama.

6. ARCA.

1. *A.* (*Cucullæa*) *ungula.* Shell cordate, inflated, short, thickness greater than the length or height; ligament area very wide; umbones incurved, distant.

Locality, Alabama.

7. INOCERAMUS.

1. *I. biformis.* Shell thin, compressed, umbonial portion with regular concentric folds or undulations, and fine striæ; paleal region smooth, without undulations, covered with very regular, closely arranged, impressed concentric lines.

This is the largest of our species, being one foot in diameter. Resembles *I. Nebrascensis,* Owen; but is distinguished from it by the greater fliguity of the folds, and by the close, regular lines.

Locality, Cahawba, Alabama.

2. *I. gibbus.*

Syn.—*I. Barabini,* Mort. var.

Shell very thin, somewhat inequivalve, semicircular, convex; concentrically plaited, plaits irregular; hinge line straight.

A fragment of this species is figured in the "Synopsis," as a variety of *I. Barabini,* but *I. Barabini* belongs to a division of the genus that has the valves nearly equilateral.

3. *I. salebrosus.* Shell semicircular, with oblique concentric ribs; ribs remote, irregular, undulating, acute.

Distinguished from the other species by the coarse, sharp ribs.

Locality, Cahawba, Alabama.

4. *I. inflatus.* Shell semicircular, somewhat equivalve, surface undulating; ribs oblique, very irregular, almost obsolete; beaks distant, buccal side inflated; anal side compressed, with a broad shallow channel in each valve.

Locality, Columbus, Mississippi. Dr. Spillman.

5. *I. triangularis.* Shell somewhat trigonal, nearly equilateral; with concentric transverse undulations or ribs, buccal side somewhat carinated; beaks compressed, slightly recurved.

Locality, Columbus, Mississippi. Dr. Spillman.

6. *I. proximus.* Shell compressed, inequilateral; ribs concentric, regularly curved, approximating.

The closely arranged ribs characterises this species.

Locality, Columbus, Mississippi. Dr. Spillman.

OSTREA.

1. *O. crenulata.* Shell subfalcate, lower valve with closely plaited squamose ridges; upper valve convex, with smooth plates; ligament area long, triangular; margin crenulated.

Resembles the young of *O. sellæformis,* and having often the habit of *O. equestris,* being attached to branches of corals, etc., by the entire length of the lower valve.

Length 1.5 in.

Locality, Eufaula, Alabama. Mr. Thornton.

RUDISTES.

Mr. Lyell was the first to point out the existence of this curious family, in the cretaceous rocks of the United States.

The fragments then known were referred to the genus Hippurites. From that time to the present I have endeavored, with the assistance of many friends, to collect the fragments of Rudistes, scattered over the prairie region of Alabama and Mississippi. The result has been the determination of two genera and seven species, and, what is remarkable, not a single fragment that could be referred to the well marked genus Hippurites has as yet been found.

Without figures it is not easy to give characteristics of the species of a family, the remains of which are so badly preserved. The following, however, may serve for the present.

RADIOLITES, Lam.

Sphærulutes, Delam.

1. *R. Ormondii.* Shell, lower valve comparatively thin, long, lamellæ angular; lip turned upwards at the outer circumference; ramifications of the mantle slightly impressed on the lip; cells small; outer surface ornamented with vertical ridges composed of the zigzag edges of the leaves composing the shell; inner surface smooth, with a thin plate extending a short distance into the aperture.

Distinguished by the thinness of the shell and ornamented exterior. The fluting and apparent joints of the outer surface suggest, at first sight, a fragment of a fossil plant.

Inscribed to my friend, Dr. John Ormond, of Tuscaloosa, who discovered this interesting species.

Locality, Marengo county, Alabama.

2. *R. lamellosis.* Shell, lower valve thick, conical, large; lip nearly horizontal, or slightly depressed towards the circumference, with radiating smooth ridges, more numerous towards the outer circumference; outer edge slightly and

abruptly turned up; exterior surface with vertical impressed lines corresponding with the ridges on the lip; cirri or ramifications of the mantle impressed, dichotomously branching; cells towards the circumference compressed lengthwise.

The numerous radiating ridges on the lip are characteristic of this species.

Locality, Lowndes county, Alabama.

3. *R. Aimesii.* Shell, lower valve large, conical, very thick; lip slightly convex, with narrow, radiating depressions towards the inner circumference, outer edge slightly plaited, with obsolete concentric undulating lines; outer surface striate.

Inscribed to Dr. Aimes, of Montgomery, to whose kindness I owe this fine fossil.

Locality, Alabama.

4. *R. undulata.* Shell, lower valve thick; lip bent slightly upwards, with distant, obtuse radiating ridges, or undulations, and obsolete radiating lines; cirri of the mantle well defined.

Locality, Marengo county, Alabama.

ICHTHIOSARCOLITES, Desmarest.

Caprinella, d'Orb.

1. *I. quadrangularis.* Shell quadrangular, curved, irregular; septa somewhat regular, abruptly bent downwards, and approximating in the channel on the inner surface of the shell; aperture terminating obliquely and rather abruptly.

Locality, Noxubie county, Mississippi. Mr. Richardson.

2. *I. loricatis.* Shell, aperture somewhat oval, irregular, obtusely rounded at the base, giving the cast an imbricated appearance.

Locality, Noxubie county, Mississippi. Mr. Richardson.

3. *I. cornutis.* Shell, aperture regularly curved, flattened on one side, septa abruptly bent downwards, and towards the concave side.

Distinguished from the preceding by the more distant and regular septa, and in the greater regularity of the curvature of the shell.

Locality, Noxubie county, Mississippi. Mr. Richardson.

I have thought proper to restore Desmarest's uncouth name, rather than violate the rule of priority.

Description of a fossil apparently indicating an extinct species of the Camel tribe.

By JOSEPH LEIDY, M.D.

Mr. Henry Pratten, of New Harmony, Indiana, has sent for my inspection, and as a donation to our Academy, an interesting fossil, which he discovered in the gravel drift of Kansas territory.

The specimen consists of the left intermaxillary bone, containing the fang of a tooth, and a small portion of the corresponding maxillary bone.

The fang of the tooth is the portion of a transformed incisor or functional canine, like that in the Camel and Lama. The crown of the tooth was directed more outwardly than in either of the latter; but it had the same form, being laterally compressed, obtuse anteriorly and acute posteriorly. At the point of emergence from its alveolus the crown measured 6¾ lines antero-posteriorly and 3¾ lines transversely. Its enamel is thin, and appears to have been smooth. The fang is laterally compressed, conical, and measures an inch and a half in length; and it is strongly curved backward and downward, and is almost parallel with the palatal margin, so that its extremity is only seven lines above the latter.

The intermaxillary bone is relatively larger and more robust than in the Camel or Lama, and it is broader and more convex above. Its nasal border is more obtuse and very much less inclined, so as apparently to indicate a longer snout in the extinct animal. The anterior or gingeval border is thick and rough as in other ruminants.

The small portion of the maxillary bone presents the remains of an alveolus, separated from the tooth of the intermaxillary by an interval, with a curved, acute margin, an inch and three-quarters long. The great distance of this alveolus from the tooth in advance, when compared with the condition of things in the Camel and Lama, arises from the great degree of extension backward and near the palate of the fang of the first functional canine.

The maxillo-intermaxillary suture, at the side of the fossil, descends, as usual, parallel with the nasal border of the intermaxillary bone, and, after reaching the palatal surface is directed in a curved line forward and inward, reaching as far as the posterior third of the position of the first tooth.

From this description it is evident the fossil indicates a distinct species of the camel tribe, and as it appears generically distant from the Camel and Lama, the name of *Camelops Kansanus* would not be inappropriate for it.

ELECTION.

Dr. Isaac A. Pennypacker, and Emile Geylin, Esq., of Philadelphia, and Eugene Borda, Esq., of Schuylkill Co., Pa., were elected *Members;* and Dr. Hiram A. Prout, of St. Louis, and Mr. Henry Pratten, of New Harmony, Indiana, were elected *Correspondents.*

October 3*d.*

Vice President LEA in the Chair.

A paper was presented by Mr. James D. Dana, intended for publication in the Proceedings, entitled "Catalogue and descriptions of Crustacea collected in California by John Le Conte, M.D.," which was referred to Dr. Le Conte, Dr. Bridges and Prof. Haldeman.

October 10*th.*

Vice-President BRIDGES in the Chair.

Letters were read:—

From the Trustees of the New York State Library, dated Albany, October 7, 1854, acknowledging the receipt of the last No. of the Proceedings.

From the California Academy of Natural Sciences, dated San Francisco, Sept. 22, 1854, transmitting the first No. of the Bulletin of that Society, and requesting exchange.

Mr. Cassin presented a paper for publication, entitled "Additions to North American Ornithology, by A. L. Heermann, M.D." Referred to Mr. Cassin, Col. McCall and Dr. Wilson.

October 17*th.*

The President, Mr. ORD, in the Chair.

A letter was read from the Lyceum of Natural History of New York, dated October 10, 1854, acknowledging the receipt of the Proceedings of the Academy, vol. 7, No. 4.